



West Texas Rain

Rainwater harvesting demonstration sites save water and money

Rainwater, one of the purest sources of water available, is scarce in West Texas. Residents in this arid land must use all available methods of saving water. Rainwater harvesting, a common water resource used in the early 1900s, is becoming one such option.

The Texas Water Resources Institute (TWRI) and Texas Cooperative Extension, working with several partners, are planning and constructing rainwater harvesting demonstrations in West Texas to educate the public about its potential as an alternative and inexpensive source of high-quality water.

Most rainwater harvesting systems in the past were for personal use, but some businesses, industries and public institutions are beginning to use these practices as well.

The Culberson County Courthouse in Van Horn, the Ward County 4-H Center in Monahans, and the Hudspeth County Extension Office in Sierra Blanca have or will soon have rainwater harvesting demonstrations, some of the first in this area.

These West Texas demonstrations help promote the systems in the area, said Mike Mecke, Extension water program specialist with TWRI in Far West Texas.

“Rainwater harvesting is of special interest in the drier half of Texas and is being promoted through the *Water for West Texans* program, headquartered at the Fort Stockton Extension Center,” Mecke said.

In Culberson County, Extension partnered with the Rio Grande Basin Initiative through TWRI, the International Boundary and Water Commission, Culberson County Underground Water District and county officials to install a 2,500-gallon rainwater harvesting tank at the Culberson County Courthouse.

(Above Left) One of the three rainwater harvesting demonstrations is located at the Culberson County Courthouse in Van Horn. This 2,500-gallon tank has been installed to catch and store the rainwater.

(Above Right) Landscape irrigation using the harvested rainwater can help maintain nice looking landscape plants, as well as conserve water.

A 2,000-gallon tank and 3,000-gallon tank at the Ward County 4-H Center is planned. The Hudspeth County Extension Office is planning a 1,000-gallon tank for inside drinking water and a 3,000-gallon tank for outside landscape irrigation.

Although harvesting rainwater for drinking water complicates installation and raises the cost of treatment, Mecke said the Extension agent for Hudspeth County, Cathy Klein, wants the demonstration to show its viability to residents who currently must haul water or buy bottled water.

Mecke said more demonstrations are tentatively planned for the West Texas region including the Alpine Library, McDonald Observatory in Fort Davis, several locations in Fort Stockton, Sanderson, San Angelo, Alpine, Ozona, Midland and El Paso.

The largest planned project is for Baptist Memorials Center, a nursing home in San Angelo. A team is developing a long range plan to install a rainwater harvesting system, drip irrigation system, in-home water conservation and low water-use landscapes at that site.


Mecke said the nursing home rainwater harvesting project will be a three- to five-year project, working with staff from Baptist Memorials, the City of San Angelo, Extension, and Texas A&M University System scientists and engineers from College Station and

San Angelo. Billy Kniffen, Extension agent for agriculture in Menard County, and John Begnaud, an Extension agent for Tom Green County, are also working on the project with Mecke.

Begnaud is guiding the planning and installation of water-efficient drip irrigation and landscape plantings. Janie Harris, Extension housing and environment specialist, is working with Kathlene Aycock, Extension agent for family and consumer sciences in Tom Green County, to set up an in-home water conservation demonstration to complement the other efforts and to monitor effectiveness.

Other rainwater harvesting demonstrations throughout other parts of Texas include the Lady Bird Johnson Wildflower Center in Austin, Wells Branch Municipal Utility District in North Austin, Advanced Micro Devices fabrication plant in Austin, and Reynolds Metals in Ingleside.

More information on designing and constructing rainwater harvesting systems is available. A new *Rainwater Harvesting* Extension publication by Russell Persyn, Dana Porter and Valeen Silvy can be found at <http://tcebookstore.org/pubinfo.cfm?pubid=1979>.

The Texas Water Development Board has recently produced the *Texas Guide to Rainwater Harvesting Third Edition*. This publication can be downloaded free of charge from either the TWDB Web site, www.twdb.state.tx.us, or from the American Rainwater Catchment Systems Association Web site, www.arcsa-usa.org. 



Extension agent for agriculture Billy Kniffen has constructed a rainwater harvesting system for his own home. These catchment tanks are used to hold up to 16,500 gallons of rainwater, providing enough water for his indoor and outdoor uses all year.